



City of Rockville

MEMORANDUM

September 7, 2004

To: Catherine Tuck Parrish
Acting City Manager

From: Robert J. Spalding, AICP
Chief of Planning

A handwritten signature in dark ink, appearing to be "RJS", is written over the name "Robert J. Spalding".

Subject: Sidewalk Standards Survey

To follow-up on Mayor and Council discussions about sidewalk widths, Randy Clay of the Planning staff conducted a brief survey of other jurisdictions and nationally-recognized standards. This survey will provide helpful comparisons with other jurisdictions in the consideration of sidewalk width standards.

An essential element of revising sidewalk width standards is the evaluation, and possible amendment of, right-of-way widths, minimum setbacks, standards for uses in and adjacent to sidewalks (including alcohol sales), and desired land uses along the street. In addition, the relationship between tree planting areas, public utility easements, storm drains, underground parking garages, and property lines must be evaluated. This is necessary to avoid unintended consequences from modified standards.

A few examples will illustrate the interrelationship of the various elements. If an 11-foot sidewalk is required by code for a four-lane road within a 70-foot right-of-way, the lanes comprise 48 feet and the sidewalks comprise 22 feet. Every foot that the sidewalk width is increased requires dedication of more land than required in the Master Plan and Streets and Public Improvements chapter.

If additional sidewalk width is permitted to be in a public improvement easement that permits full pedestrian access then the building setback has to be increased beyond the minimum setbacks permitted in the zone. Since an underground parking garage can still be built to the property line, the depth of the first level of parking becomes critical when evaluating the feasibility of public utility easements above the garage and tree planting areas. If sidewalk standards are substantially increased, a waiver provision should be considered to adapt to the unique circumstances of a particular case.

The staff work required to fully evaluate the impacts of potential changes and make a staff recommendation to the Planning Commission and the Mayor and Council is not currently included in the work programs of the Planning Division, Long-Range Planning Division, Traffic and Transportation Division, Engineering Division, Legal Department, and the Forestry Division. Typically, substantial changes in right-of-way requirements are conducted through a master plan amendment or a substantial revision in the Streets and Public Improvements chapter of the City Code. A Zoning Ordinance text amendment may also be required to supplement revisions to the Master Plan and the Streets and Public Improvements chapter. Because of the comprehensive approach required for possible changes, it would be appropriate for such an effort to be part of the comprehensive Zoning Ordinance revisions.

A comprehensive approach is necessary to ensure consistency between the Master Plan, Zoning Ordinance, Streets and Public Improvements chapter, and City policies. These are essential elements that residents, applicants, staff, the Planning Commission, and the Mayor and Council rely on for predictability and consistent application in the development review process.

cc: Art Chambers
Hal Cranor
Burt Hall
Sondra Block
Jim Wasilak
Larry Marcus
Susan Nolde
Wayne Noll
Randy Clay

Attachment



City of Rockville

MEMORANDUM

August 26, 2004

TO: Bob Spalding, Chief of Planning, AICP

FROM: Randy Clay, Planning Technician *RC*

SUBJECT: Sidewalk Design Standards

BACKGROUND

The Mayor and Council have raised concerns about appropriate sidewalk standards for the Town Center. Staff has conducted a survey of recommended sidewalk standards for mixed use commercial areas to provide background information for further consideration.

The survey includes recommended standards from nationally recognized experts such as the U.S. Dept. of Transportation, Walkable Communities, Inc. (Dan Burden), Duany Plater-Zyberk, The Institute of Transportation Engineers, and American Planning Association. The survey also includes standards from other urbanized commercial areas in California, Oregon, Virginia, Texas, Georgia, Massachusetts, Washington, and Washington, D.C.

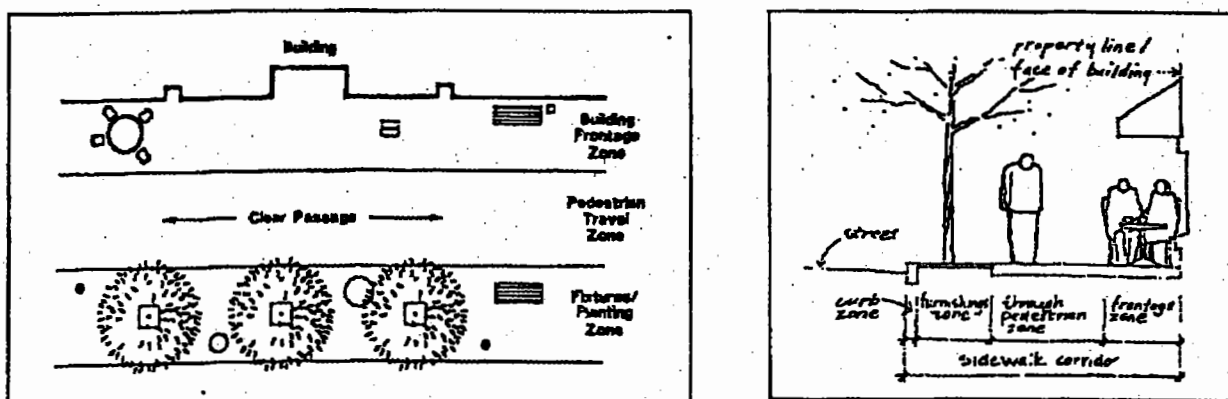
The following table includes the results from individual sources:

Comparative Analysis of Sidewalk Standards	
Developed Area Classification	Commercial and Mixed Use Areas/Major Pedestrian Corridors/Urban Core/Urban Center Business District/Transit Corridors/Downtowns/Town Centers
Pedestrian Travel Zone	
Desirable	8 ft to 37 ft
Minimum	5 ft to 6 ft
Street Edge/Sidewalk Zone	
Desirable	6 ft to 10 ft
Minimum	3 ft to 4 ft
Building Frontage Zone	
Desirable	6 ft to 10 ft
Minimum	5 in to 2 ft
<i>*Data for this study were compiled from guideline, ordinance, and report materials. A cross section of government agencies from eight states, research organizations, and various media publications comprise the source material used in the final analysis.</i>	

This survey supplements the Streetscape Elements Survey (Fall 2003), which provided examples of both street and sidewalk dimensions in nearby urbanized areas. A copy of this survey is attached and includes new material from this study.

SUMMARY OF FINDINGS

The below figures illustrate the concepts of passive and active space incorporated into the design of sidewalk facilities. By applying three separate zones, areas are created for pedestrian travel, rest, and socializing activities.



Sources: *Pedestrian Facilities Guidebook*, Washington State. *Portland Pedestrian Design Guide*, Portland, Oregon.

The study uses an urban classification system to group standards based on the type of uses supported by the streetscape. The findings reflect the need to separate public sidewalks into functional spaces as they relate to three independent zones. These will be referred to as the pedestrian zone, the street edge and sidewalk buffer zone, and building face zone. The attached table details the standards identified by design experts and in various urban areas.

The widths of sidewalks in mixed use urban areas between the curb and building face range from 8 feet to 37 feet. However, most are between 10 and 20 feet. For the unobstructed walkway, most pedestrian zones range from 6 to 12 feet. The majority of zones buffering these walkways from roadway range from 4 to 6 feet. Additionally, space directly fronting a building edge can range anywhere from 5 inches to 10 feet depending on need. Collectively, these figures describe standards for an overall range between 10 ½ to 28 feet to be used in design of sidewalk facilities in urban areas with a more common range yielding between 10 and 20 feet as mentioned above.

A brief description of each zone follows:

PEDESTRIAN ZONE

A pedestrian zone acts as the exclusive walkway space for unobstructed travel and serves the mobility needs of users. At the very minimum, widths of 4 to 6 feet were recommended in the

study and reflect 34% of sources surveyed. Sidewalk widths of a minimum 5 feet were cited as necessary to accommodate the travel of two people walking side-by-side. In most accounts, where pedestrian activity is more intense, the need to establish even wider standards is noted. A range of 8 feet to 20 feet reflects this need among more intense urban land uses and accounts for 61% of urban areas in the study. There were also two outlier figures of 30 and 37 foot sidewalk widths. Total sidewalk widths below 8 feet are typically outside of major mixed-use commercial areas and are included for reference.

STREET EDGE & SIDEWALK BUFFER ZONE

The street edge and sidewalk buffer zone serves to create a barrier between roadways and pedestrian traffic. Passive activity areas may be carved from these areas providing opportunities for rest as well. Based on minimum and desirable width figures, 76% of the survey recommend allocating four to six feet of public space to this treatment. Benefits cited for its inclusion range from providing a higher level of comfort for pedestrians to sighting of pedestrian obstructions such as light poles, road signage, and bus shelters. These spaces are also mentioned as ideal for snow storage as well as aid in the prevention of pedestrians being splashed with elements within roadways.

BUILDING FRONTAGE ZONE

A building frontage zone allows the opportunity to project expressions of retail uses beyond the building face and into the public realm. The survey reflects a growing focus on the separation of this area. Two interesting standards emerge. First, a minimum width of 5 inches to 2 feet can be used to achieve the purpose of the zone. Second, where it is desired, these widths can range from 6 to 10 feet. These dimensions would be utilized for the location of outdoor cafes or vending operations. Examples are illustrated in the accompanying attachment.

Further, the survey alludes to the flexibility built into the placement of each zone. A hierarchal balance within these public spaces is achieved through the location of each zone in the most ideal right-of-way. This characteristic allows streetscape design to adapt to the many constraints imposed upon specific sights. The recommended ranges between minimum and desirable standards for each zone further reinforce this trait found throughout the survey.

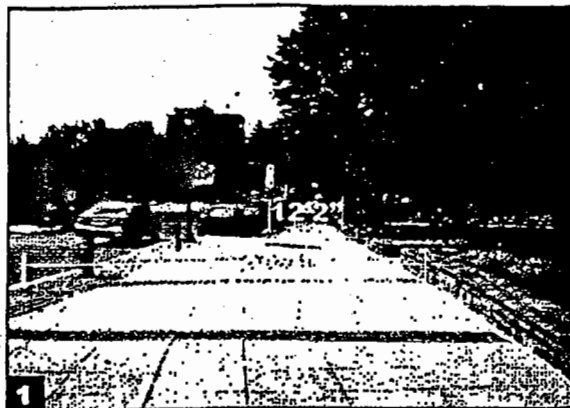
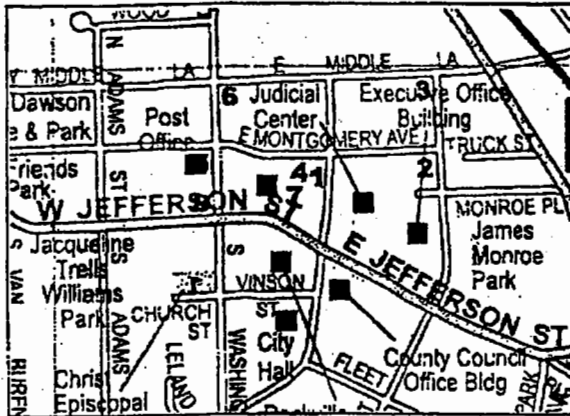
Attachment: Sidewalk Standards Survey
Attachment: Streetscape Elements Survey

Introduction

Streetscape Elements

The designs of streetscapes for urbanized areas reflect how elements of development character and context influence both the shape and creation of the built environment. Varying conditions have the effect of producing myriad patterns, which can be seen and experienced in urban streetscapes today. Upon entering a space, there is a certain identity translated to the individual through the use and organization of elements within the area. To advance this, jurisdictions can create guiding principals for urban design that can then be applied to how development achieves the type of environments stakeholders envision. This appendix is provided to facilitate a visual study of the differences and similarities found throughout the design of streetscapes in the Washington Metropolitan Region. Specifically, existing and built conditions are provided to help visualize how some streetscape elements are utilized in both public and private development. This will provide a better understanding of future plans as they are created and shared. Quantitative data were gathered using both curb face-to-block face and curb face-to-sidewalk edge measurement techniques. In some cases, approximations of square footage also are provided for interpretation of space dimensions. Please note also that in some instances measurements throughout an entire element will vary slightly from the source of measurement based on variable construction standards and conditions.

Rockville Town Center, Rockville, Maryland



E. Montgomery Ave. & Maryland Ave.
Walkway: 22'2"
Narrowest Walkway: 12'2"



Courthouse Square & Monroe St.
Interior Walkway: 8'10"
Column Width: 4'5"
Exterior Walkway: 12'7"

Streetscape Elements



Monroe St. & E. Middle Ln.
Planting Area: 5'0"
Walkway: 9'0"

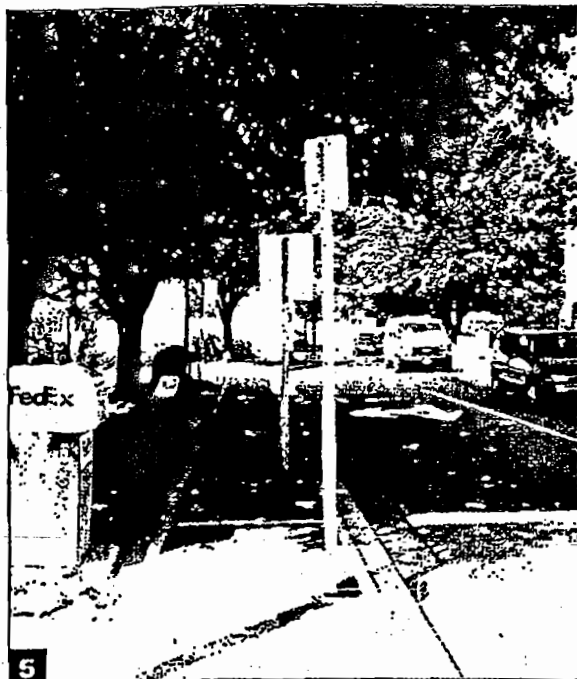


Rockville Center at Maryland Ave. & Courthouse Sq.
Fountain Park Area: Approx. 8,610 sq. ft.
Fountain Seating/Walkway Area: Approx. 1,282 sq. ft.
Fountain Area: Approx. 113 sq. ft.
Exterior Walkway: 10'0" **Continued...**

Rockville Town Center, Rockville, Maryland



6
E. Middle Ln. & N. Washington St.
Street Edge Planting Area: 4'9"
Center Walkway: 4'3"
Building Edge Planting Area: 3'0"

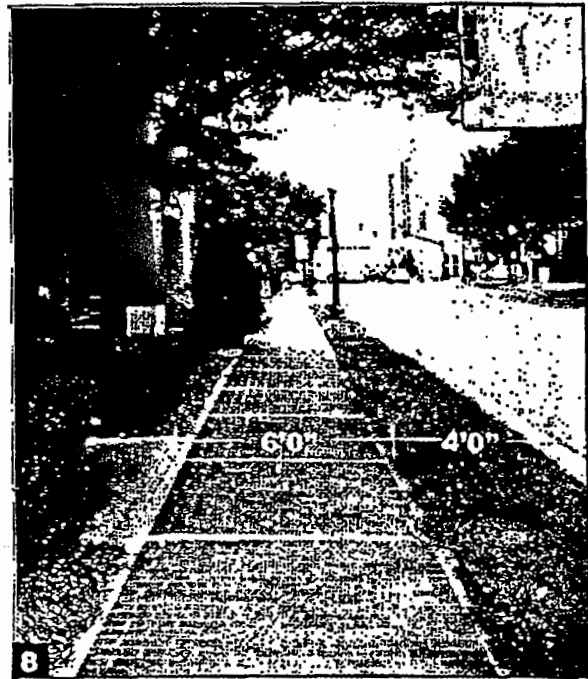


5
E. Montgomery Ave. & N. Washington St.
Walkway: 5'7"

Streetscape Elements

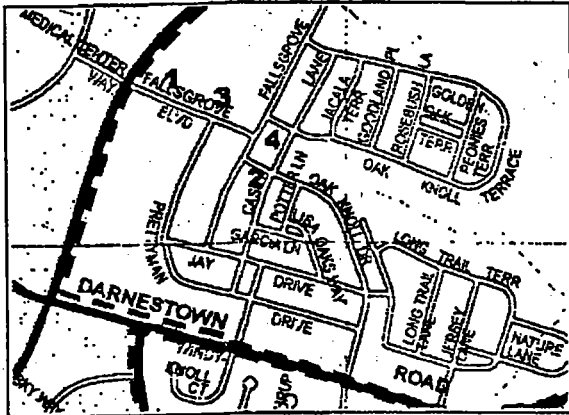


7
Rockville Center at Maryland Ave. & Courthouse Sq.
Walkway: 5'0"



8
S. Washington St. & W. Jefferson St.
Walkway: 6'0"
Planting Area: 4'0"

Fallsgrove, Rockville, Maryland

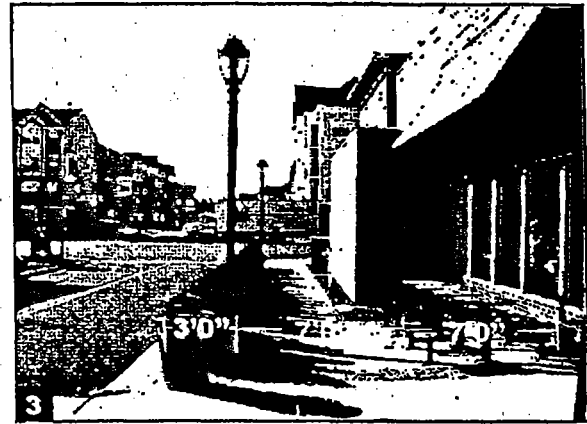


Fallsgrove Blvd. Between Shady Grove Rd. & Prettyman Dr.
 Interior Walkway: 6'2"
 Walkway Buffer: 1'5"
 Planting Area: 3'5"
 Exterior Walkway: 4'7"
 Street Edge Planting Area: 6'6"

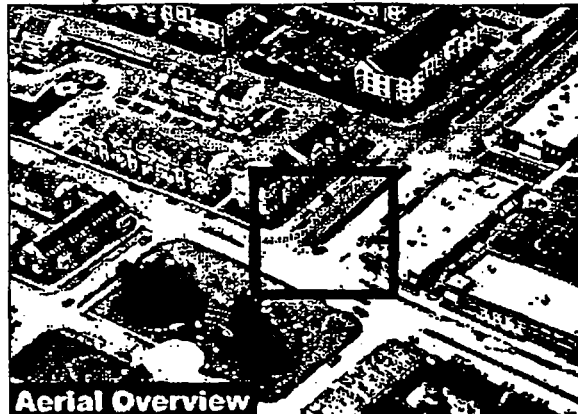


Oak Knoll Dr. & Casey Ln.
 Planting Strip: 2'0"
 Walkway: 4'7"
 Parking Lane: 8'0"
 Drive Lane: 17'5"

Streetscape Elements



Fallsgrove Village Center at Prettyman Dr. & Falls Grove Blvd.
 Planting Area: 3'0"
 Walkway: 7'0"
 Amenity Zone: 7'0"

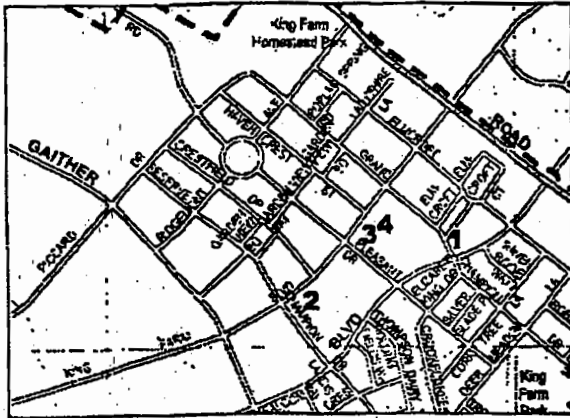


Aerial Overview



Fallsgrove Blvd. & Falls Grove Dr.
 Planting Strip: 2'0"
 Walkway: 4'8"
 Planting Area: 6'6"
 Parking Lane: 7'0"
 Bicycle Lane: 5'0"
 Driving Lanes: 22'5"
 Median: 13'5"

King Farm, Rockville, Maryland

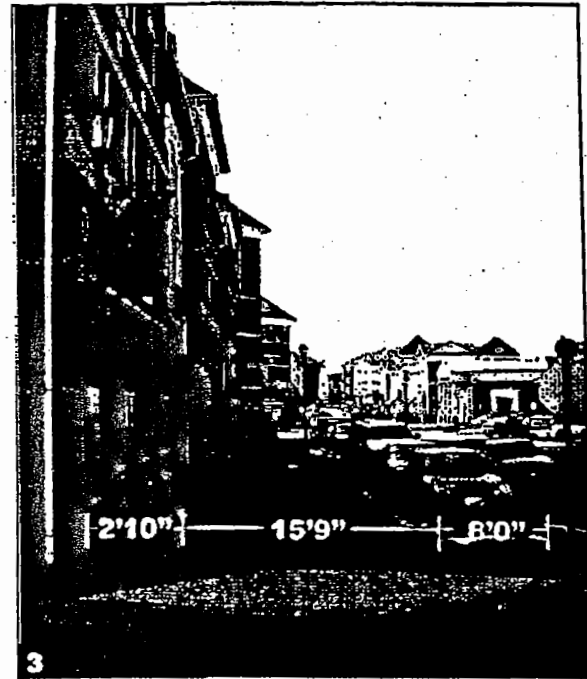


Redland Blvd. & Grand Champion Dr.
Building Edge Planting Area: 10'8"
Walkway: 4'0"
Street Edge Planting Area: 6'0"



King Farm Blvd. Between Reserve Champion Dr.
& Crest Field Dr.
Street Buffer Zone: 17'
Planting Area: 6'7"
Walkway: 4'2"
Amenity Zone: 4'0"

Streetscape Elements

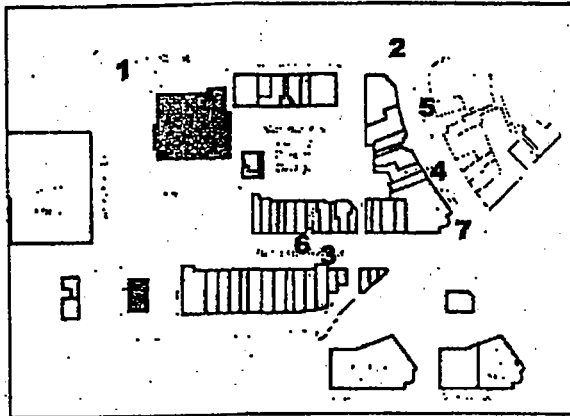


King Farm Village Center on King Farm Blvd.
Between Havencrest St. & Pleasant Dr.
Amenity Zone: 2'10"
Walkway: 15'9"
Parking Lane: 8'0"



King Farm Village Center on King Farm Blvd.
Between Havencrest St. & Pleasant Dr.
Walkway: 8'5"
Amenity Zone: 8'0"

Bethesda Row, Bethesda, Maryland

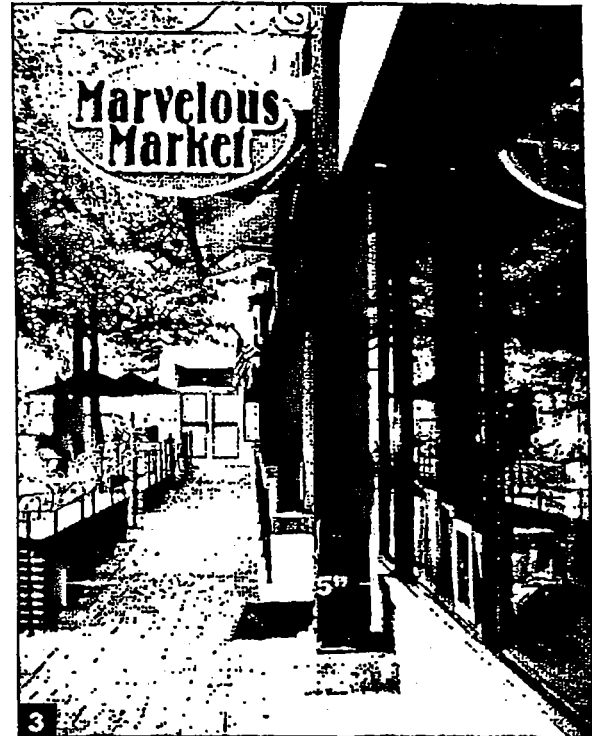


Elm St. & Arlington Rd.
Walkway and Planting Area: 11'2"



Elm St. & Woodmont Ave.
Walkway and Planting Area: 13'8"

Streetscape Elements



Bethesda Ave. Between Woodmont Ave. & Arlington Rd.
Walkway: 5'0"
Storefront Expansion Zone: 1'5"



Woodmont Ave. Between Bethesda Ave. & Elm St.
Storefront Expansion Zone: 1'5"
Pedestrian Walkway: 5'0"
Amenity Zone: 10'0"
Planting Buffer Zone: 4'0"
Street Buffer Zone: 1'9"

Continued...

Bethesda Row, Bethesda, Maryland

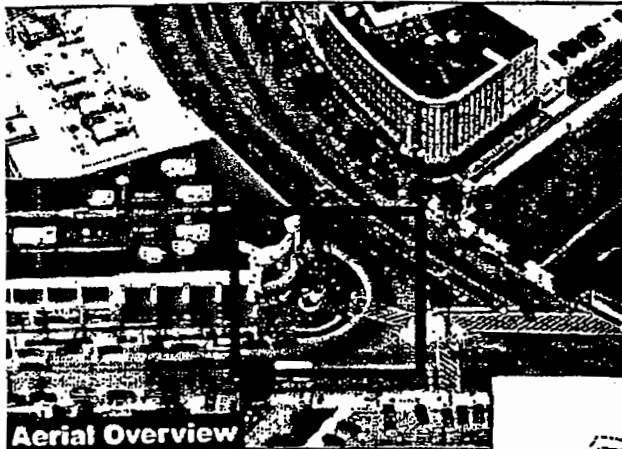
Streetscape Elements



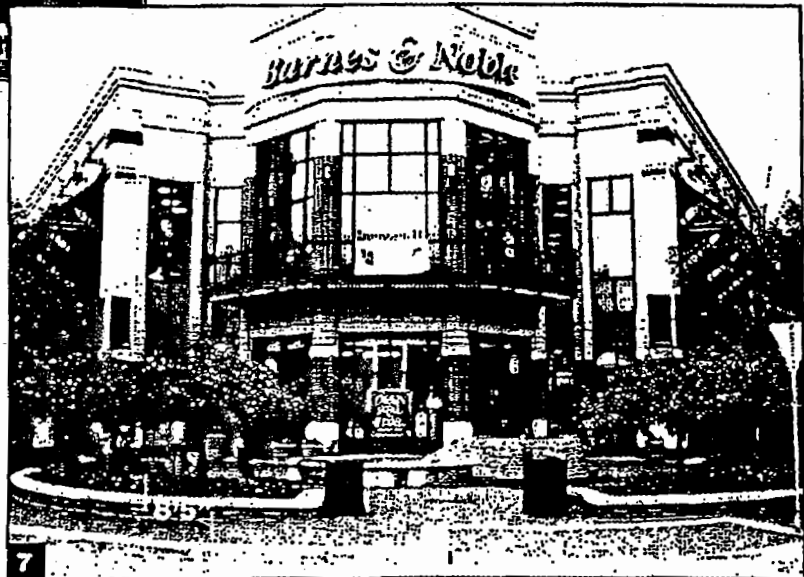
Woodmont Ave. Between Bethesda Ave. & Elm St.
 Street Buffer Zone: 2'5"
 Planting Area: 2'3"
 Amenity Zone: 8'5"
 Amenity Buffer: 1'2"
 Walkway: 5'0"
 Storefront Expansion Zone: 1'2"



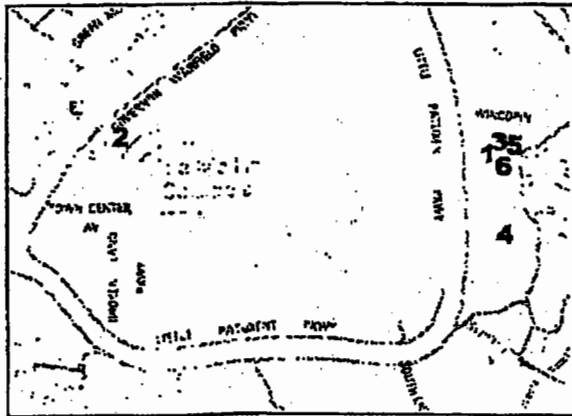
Bethesda Ave. Between Woodmont Ave. & Arlington Rd.
 Street Buffer Zone: 1'9"
 Planting Area: 3'10"
 Amenity Zone: 5'5"
 Amenity/Walkway Buffer: 1'0"
 Walkway: 5'0"
 Storefront Expansion/Amenity Zone: 2'0"



Aerial Overview
 Woodmont Ave. & Bethesda Ave.
 Exterior Walkway: 8'5"
 Plaza Area: Approx. 2,808 sq. ft.
 Fountain Area: Aprox. 135 sq. ft.



Columbia Town Center, Columbia, Maryland

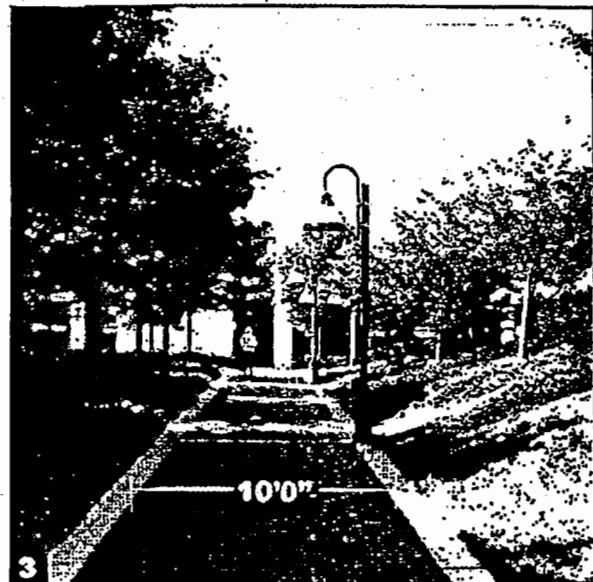


1
Wincopin Circle Between Sterrett Pl. &
South Entrance Rd.
Walkway: 5'0"
Planting Area: 4'0"

Streetscape Elements



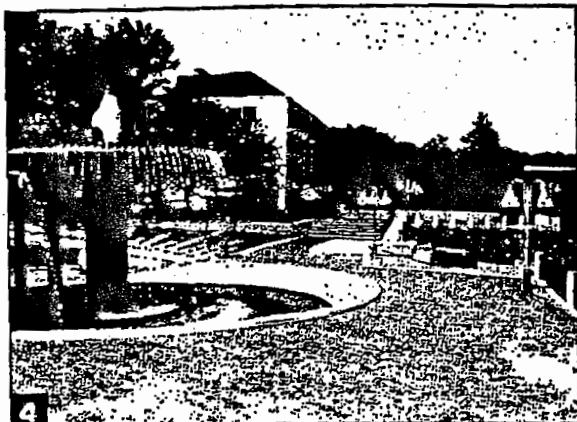
2
Twin Rivers Rd. Between Broken Land Pkwy. &
Little Patuxent Pkwy.
Walkway: 6'0"
Planting Area: 7'0"



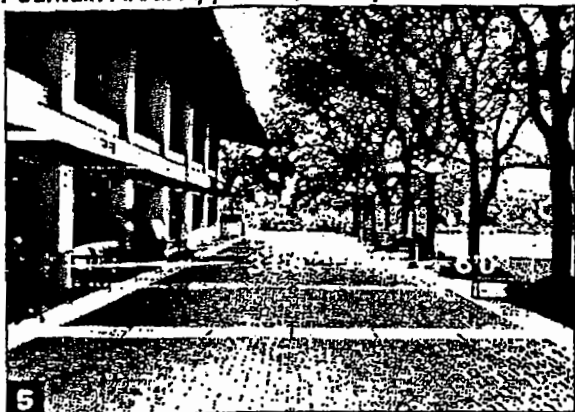
3
Town Center Plaza On Wincopin Circle Between
Sterrett Pl. & South Entrance Rd.
Walkway: 10'0"
Utility Area: 1'0"

Continued...

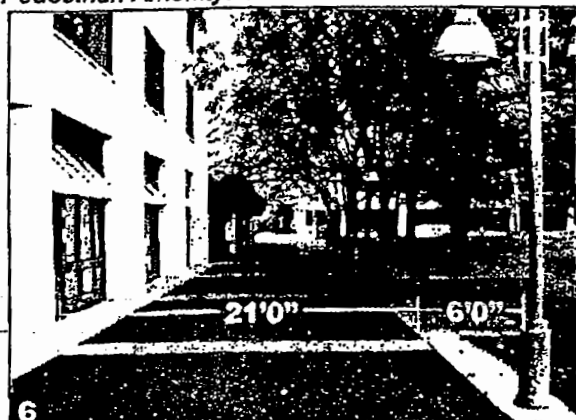
Columbia Town Center, Columbia, Maryland



4
Town Center Plaza Fountain On Wincopin Circle
Between Sterrett Pl. & South Entrance Rd.
Fountain Plaza Area: Approx. 8,500 sq. ft.
Fountain Area: Approx. 2,250 sq. ft.

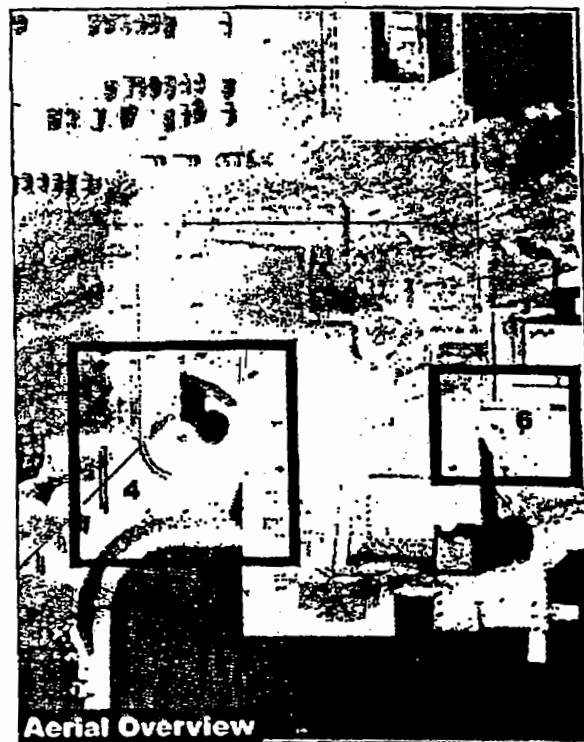


5
Town Center Plaza On Wincopin Circle Between
Sterrett Pl. & South Entrance Rd.
Walkway: 31'0"
Pedestrian Amenity: 6'0"



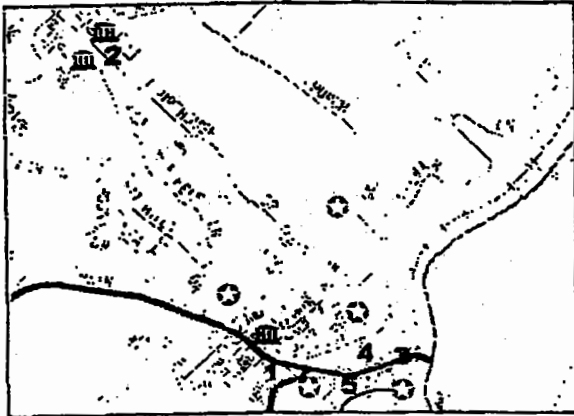
6
Town Center Plaza On Wincopin Circle Between
Sterrett Pl. & South Entrance Rd.
Walkway: 21'0"
Pedestrian Amenity: 6'0"

Streetscape Elements



Aerial Overview

Ellicott City, Maryland



Roussey Ln. & Old Columbia Pike
Walkway: 3'5"



Court Place & Court Drive
Walkway: 4'0"
Bollard Zone: 2'7"

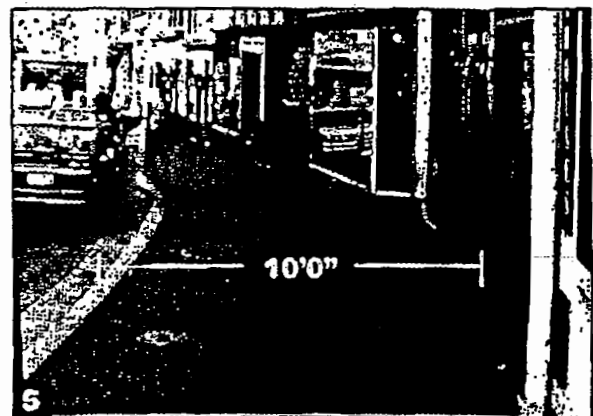
Streetscape Elements



Main St. & Maryland Ave.
Left Walkway: 6'5"
Left Vehicular Zone: 12'0"
Right Driving Lane: 12'0"
Right Parking lane: 7'5"
Right Walkway: 8'0"

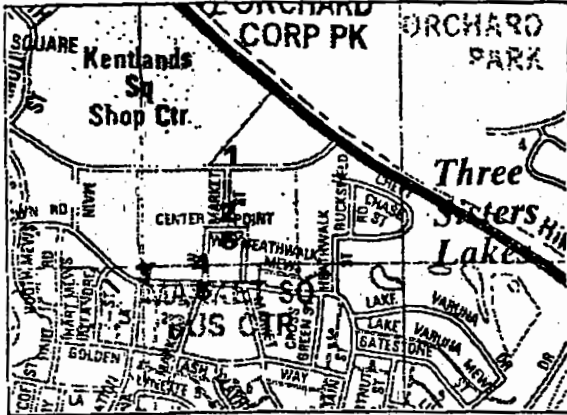


Main St. Between Tiber Alley & Maryland Ave.
Walkway: 7'0"



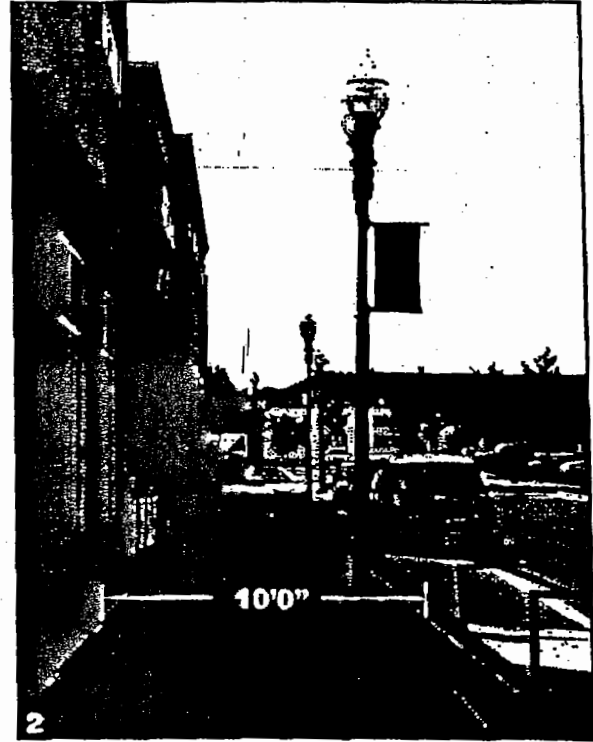
Main St. Between Tiber Alley & Old Columbia Pike
Walkway: 10'0"

Kentlands, Gaithersburg, Maryland

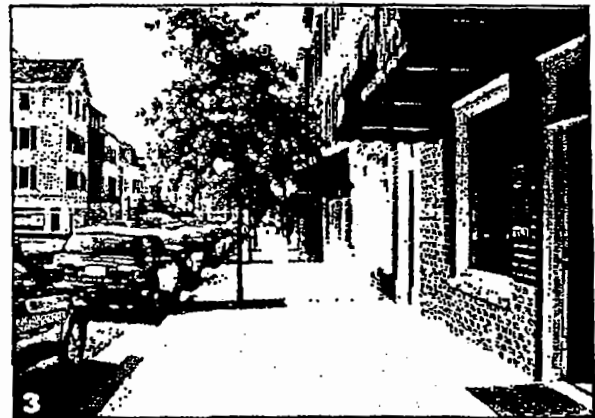


Kentland Blvd. & Market St.
Walkway: 7'6"
Planting Area: 3'0" (Expands to 6'0")

Streetscape Elements



Center Point Way & West Market St.
Walkway: 10'0"



Main St. & Inspiration Ln.
Walkway and Planting Area: 11'0"

Continued...

Kentlands, Gaithersburg, Maryland

Streetscape Elements



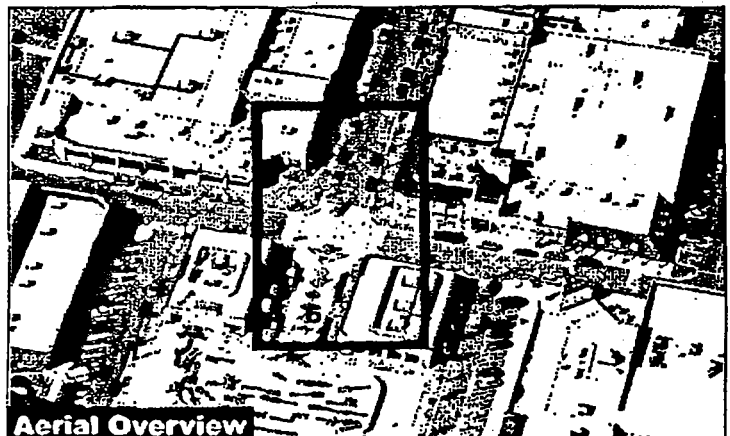
4
Main St. & Center Point Way
Walkway and Amenity Zone: 19'0"



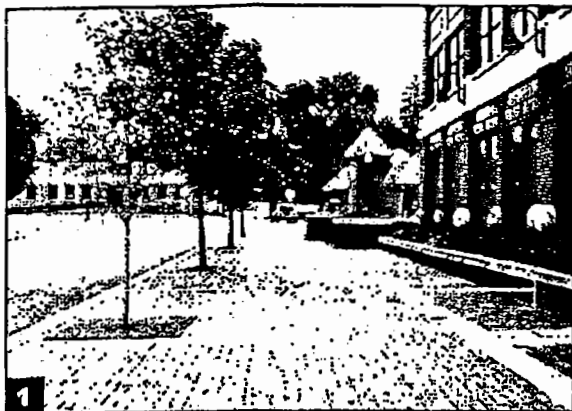
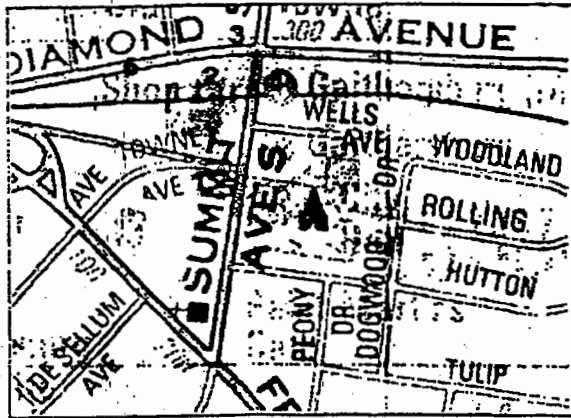
5
Inspiration Ln. & Main St.
Left Walkway: 12'5"
Parking Lane: 7'0"
Driving Lane: 20'0"
Right Walkway: 11'0"



6
Market Street East & Center Point Way
Plaza Area: Approx. 2,530 sq.ft.
Left Amenity Zone: 19'5"
Center Walkway: 27'0"
Right Planting Area: 4'5"
Right Walkway: 9'5"



Olde Towne Gaithersburg, Maryland

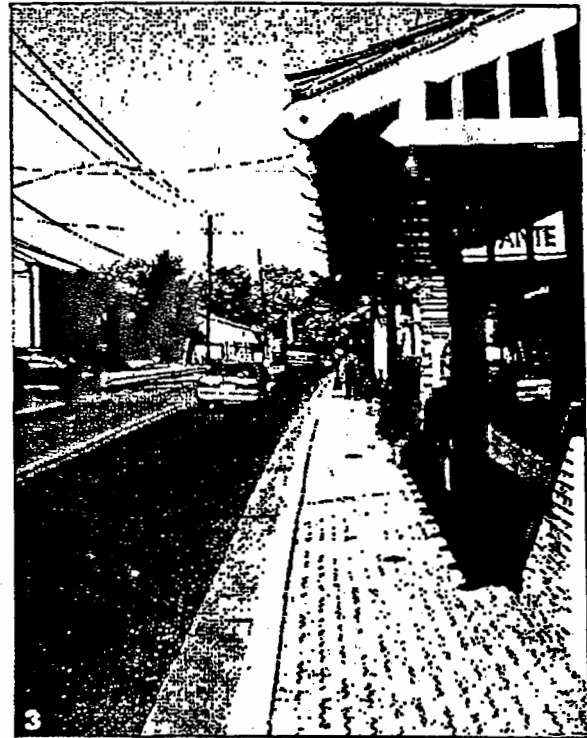


1
Old Towne Ave. Between S. Summit Ave. &
Faulks Corner Ave.
Walkway and Planting Area: 21'6"

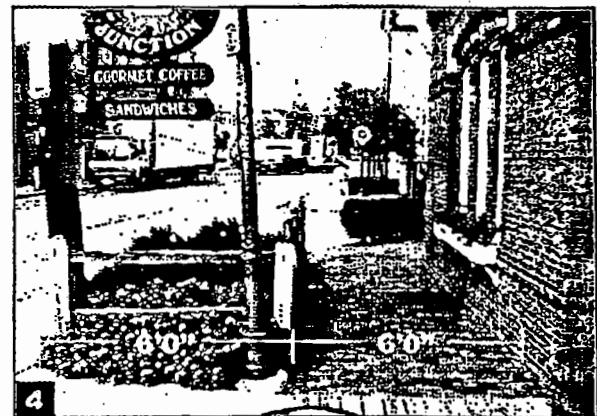


2
E. Diamond Ave. Between N. Summit Ave. &
Park Ave.
Walkway: 8'3"

Streetscape Elements



3
N. Summit Ave. & E. Diamond Ave.
Walkway: 5'8"



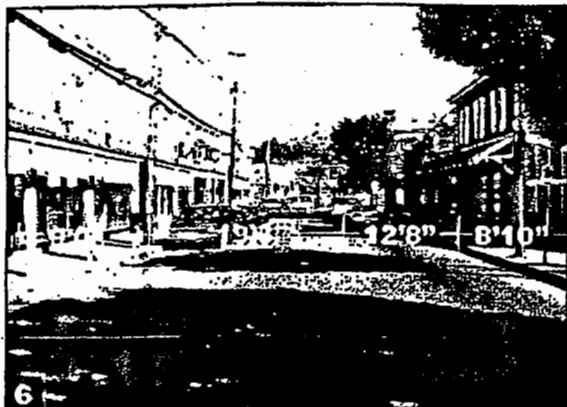
4
N. Summit Ave. Between E. Diamond Ave. &
CSX/WMATA Rail Line
Walkway: 6'0"
Planting Area: 6'0" (Narrows to 2'0")

Continued...

Olde Towne Gaithersburg, Maryland



5
S. Summit Ave. & Old Towne Ave.
Walkway and Planting Area: 27'0"

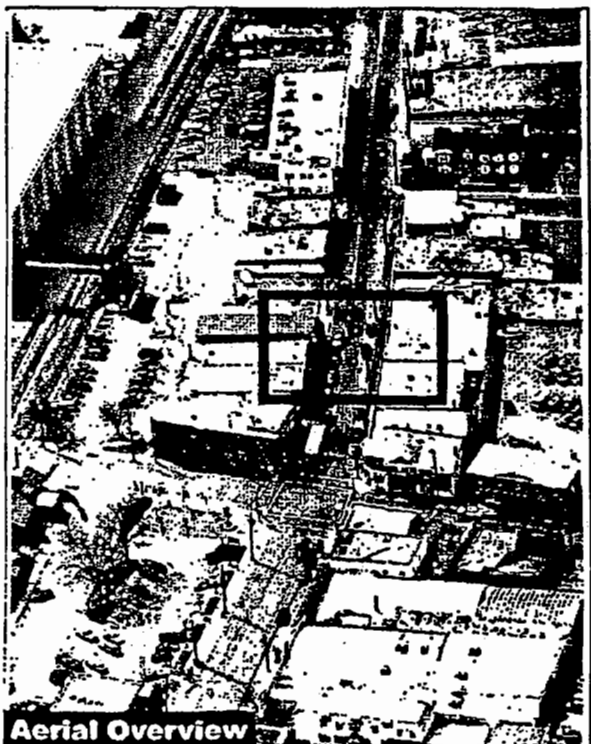


6
E. Diamond Ave. Between Park Ave. & N.
Summit Ave.
Left Walkway: 9'0"
Left Vehicular Zone: 19'3"
Right Driving Lane: 12'8"
Right Walkway: 8'10"

Streetscape Elements

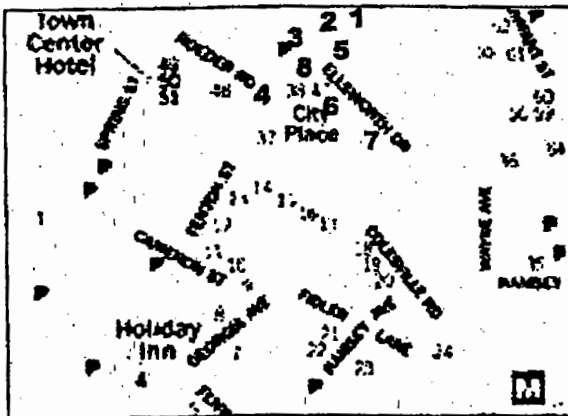


7
Olde Towne Ave. & S. Summit Ave.
Walkway and Planting Area: 12'0"

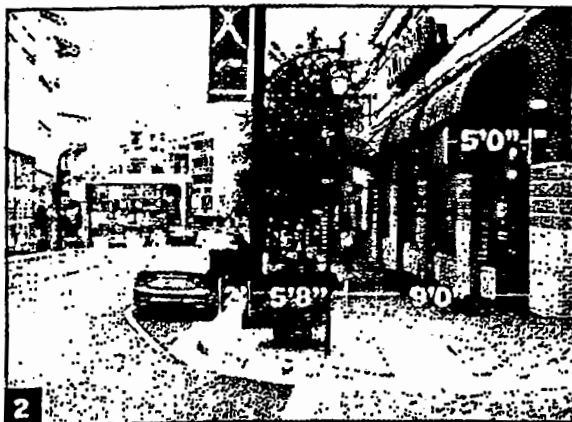


Aerial Overview

City Place, Downtown Silver Spring, Maryland



Fenton St. Between Wayne Ave. & Ellsworth Dr.
Street Buffer Zone: 2'0"
Planting/Amenity Area: 6'8"
Walkway: 8'8"
Building Face Awning: 5'0"



Fenton St. Between Wayne Ave. & Ellsworth Dr.
Street Buffer Zone: 2'0"
Planting/Amenity Area: 6'8"
Walkway: 9'0"
Pedestrian Awning: 5'0"

Streetscape Elements



Fenton St. & Ellsworth Dr.
Street Buffer Zone: 2'0"
Planting Area: 6'8"
Walkway: 23'7"
Pedestrian Awning: 8'0"



Roeder Rd. & Fenton St.
Street Buffer Zone: 2'0"
Planting Area: 9'8"
Pedestrian Overpass: 83'5"

City Place, Downtown Silver Spring, Maryland

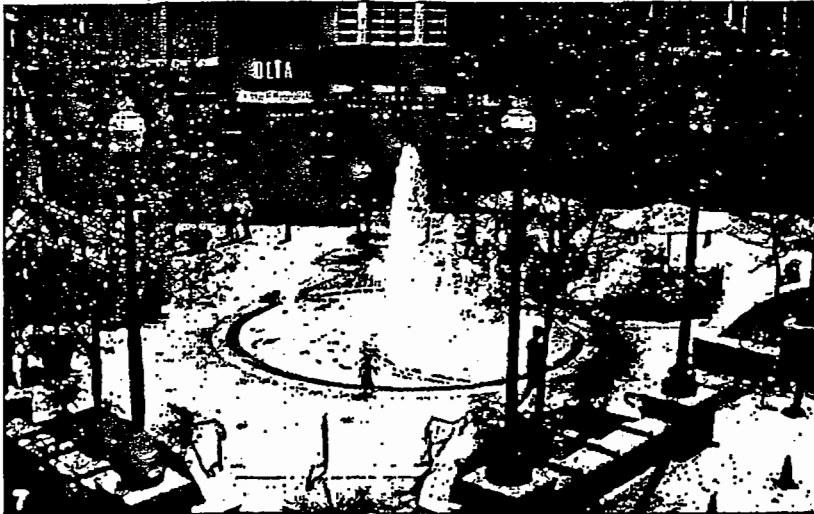
Streetscape Elements



5
Fenton St. & Ellsworth Dr.
Walkway: 11'5"
Planting Area: 4'0"
Street Buffer Zone: 2'0"

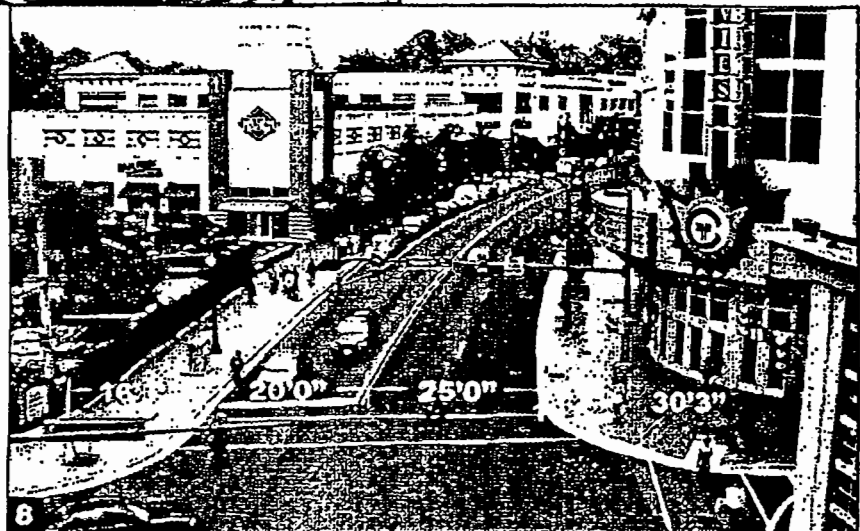


6
Ellsworth Dr. Between Fenton St. & Georgia Ave.
Street Buffer Zone: 2'0"
Planting Area: 4'0"
Walkway: 5'0"
Retail Expansion Zone: 10'0"



Ellsworth Dr. Between Fenton St.
& Georgia Ave. "Downtown Silver
Spring Fountain"
Plaza Area: Approx. 3,190 sq. ft.

Intersection of Fenton St.
& Ellsworth Dr.
Left Walkway: 16'3"
Left Driving Lane: 20'0"
Right Driving Lane: 25'0"
Cross Walk: 10'5"
Right Corner Walkway: 30'3"



Comparative Analysis Figures & Illustrations



Avenue with Parking

Purpose: Connects town centers and neighborhoods. Avenues go from neighborhoods to town centers, and are not long (no more than one mile). Avenues may circulate around a square or neighborhood park.

Street Features

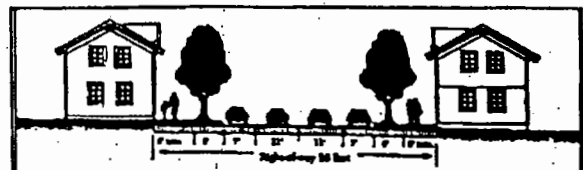
- Street width 24 ft. on both sides of median with on-street parking (17 ft. if no parking), curb and gutter
- Median width 12-16 ft.
- Travel lanes 11 ft.
- Maximum two travel lanes
- Bike lanes and planting strips 6 ft.
- Sidewalks 5-8 ft. on each side
- Average speed 25-30 mph
- Utility location — underground
- Drainage — Curb and gutter, median can have swale for natural drainage and water retention

Buildings and Land Use

- Mixed residential and commercial use
- Buildings brought close to sidewalk
- Consistent building line recommended
- Place prominent public buildings and plazas at end of vista

Sidewalks in Business Districts and Downtowns
Healthy Neighborhood Street Design
Local Government Commission- California

Streetscape Elements



Main Street without Median

Purpose: Provides access to, and a space for, neighborhood commercial and mixed-use buildings.

Street Features

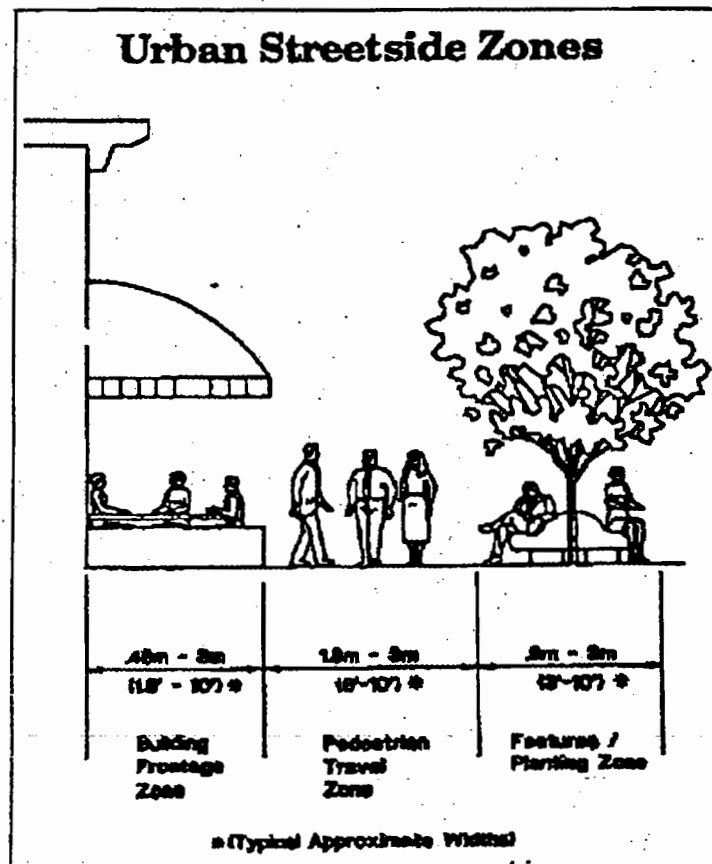
- Travel lanes 11 ft. with striped parking
- Maximum 6 travel lanes
- Planting wells 6 ft. / landscaped median optional
- Sidewalks minimum of 8 ft. each side
- Average speed 20-25 mph
- Utility location — underground
- Drainage — Curb and gutter
- Includes bulbouts at intersections and mid-block crossings
- Bike lanes optional but preferred

Buildings and Land Use

- Commercial and mixed use
- Buildings next to sidewalk
- Consistent building line recommended
- Pedestrian awnings, arcades, sidewalk dining and retail recommended

Sidewalks in Business Districts and Downtowns
Healthy Neighborhood Street Design
Local Government Commission- California

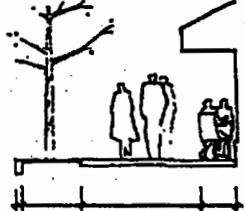
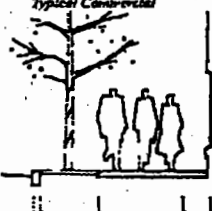
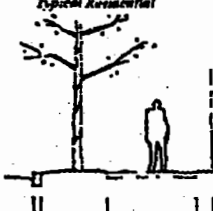
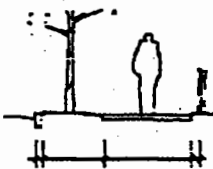
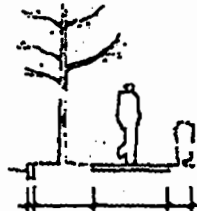
Urban Streetside Zones



Sidewalks in Business Districts and Downtowns
Pedestrian Facilities Guidebook
Washington State

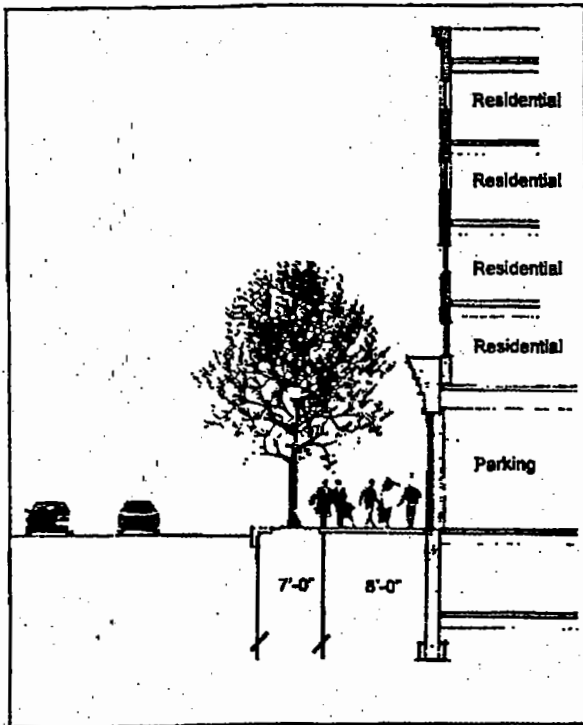
Comparative Analysis Figures & Illustrations

Streetscape Elements

Sidewalk Corridor	Application	Recommended Configuration
4.6 m (15' - 0")	Recommended in Pedestrian Districts, especially for arterial streets or where ROW width is 24.5 m (80'-0").	 <p>Curb Zone Furnishings Zone Through Pedestrian Zone Frontage Zone</p> <p>150 mm 1.2 m 2.5 m 750 mm</p> <p>(0' - 6") (4' - 0") (8' - 0") (2' - 6")</p>
3.7 m 12' - 0"	Recommended for City Walkways, for local streets in Pedestrian Districts; and for streets where ROW width is 18.2 m (60'-0").	<div> <div>  <p>Typical Commercial</p> <p>Curb Zone Furnishings Zone Through Pedestrian Zone Frontage Zone</p> <p>150 mm 1.2 m 1.9 m 450 mm</p> <p>(0' - 6") (4' - 0") (6' - 0") (1' - 6")</p> </div> <div>  <p>Typical Residential</p> <p>Curb Zone Furnishings Zone Through Pedestrian Zone Frontage Zone</p> <p>150 mm 1.2 m 1.9 m 450 mm</p> <p>(0' - 6") (4' - 0") (6' - 0") (1' - 6")</p> </div> </div>
3.4 m 11' - 0"	Recommended for Local Service Walkways where ROW width is 15.2 m (50'-0"). Accepted for City Walkways where ROW width is 15.2 m (50'-0") provided Through Pedestrian Zone is 1.9 m (6'-0").	 <p>Curb Zone Furnishings Zone Through Pedestrian Zone Frontage Zone</p> <p>150 mm 1.2 m 1.9 m 150 mm</p> <p>(0' - 6") (4' - 0") (6' - 0") (0' - 6")</p>
3.0 m (10' - 0")	Recommended for Local Service Walkways in residential zones of R-7 or less dense where ROW width is less than 15.25 m (50'-0").	 <p>Curb Zone Furnishings Zone Through Pedestrian Zone Frontage Zone</p> <p>150 mm 1.2 m 1.5 m 150 mm</p> <p>(0' - 6") (4' - 0") (5' - 0") (0' - 6")</p>

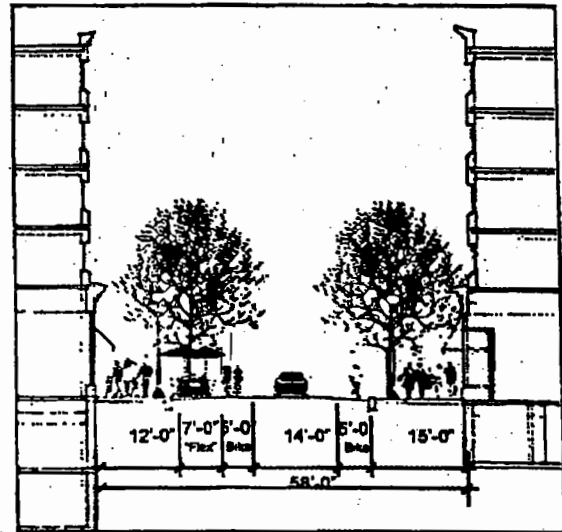
Guidelines for Sidewalk Corridors
Portland Pedestrian Design Guide
Portland, Oregon

Comparative Analysis Figures & Illustrations

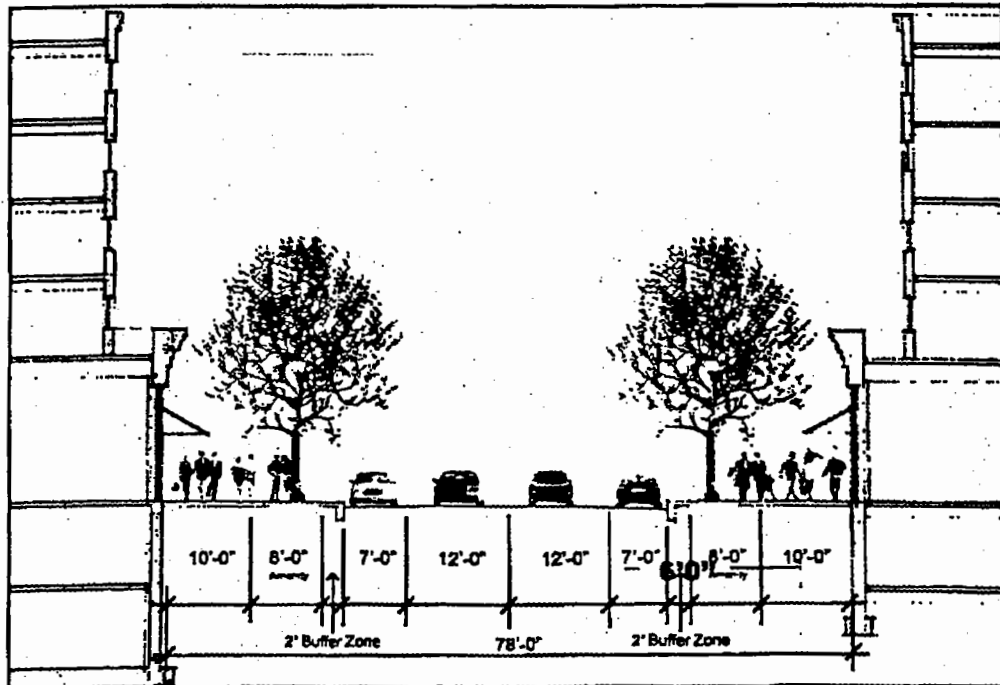


*N. Washington Street Section
Rockville Town Center Design Guidelines
City of Rockville, Maryland*

Streetscape Elements



*Newmarket Street Section
Rockville Town Center Design Guidelines
City of Rockville, Maryland*



*Maryland Avenue Section
Rockville Town Center Design
Guidelines*

City of Rockville, Maryland